

Health and Safety manual for external companies

Coordinating business
activities in Barcelona
City Council



Ajuntament
de Barcelona

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Introduction

INTRODUCTION

One of Barcelona City Council's objectives is to foster a culture of health and safety within its organisation, understanding prevention to be not only a reduction in the number of accidents, but also a continual improvement in working conditions, its commitment to people and the efficiency of the organisation.

Barcelona City Council has an Occupational Risk Prevention Service which, in an associated way, provides cover to municipal, district and independent agencies and public business organisations.

In order to ensure coordination in the application of health and safety regulations where employees from two or more companies and/or Barcelona City Council personnel carry out their functions in the same working environment, the Risk Prevention Service has a management procedure for coordinating business activities.

As part of this procedure, Barcelona City Council informs the businesses concerned about any risks pertaining to the municipal workplace where they carry out their activities which may affect them, as well as the corresponding prevention and emergency measures.

At the same time, it provides everyone involved with the information received concerning specific risks to the companies concerned, in particular any that can be worsened or modified by circumstances arising from the activities carried out.

OCCUPATIONAL HEALTH AND SAFETY POLICY

Barcelona City Council establishes the effective health and safety protection of municipal employees, as an essential value for the organisation, and the integration of occupational risk prevention in its management system as permanent strategic objectives, in order to achieve an authentic culture of prevention.

The basic operational principle is to foster the integration of preventative actions into all of the organisation's activities and at all organisational levels.

In accordance with these principles, the City Council is adopting the following commitments:

- › To make progress in ensuring compliance with the legal and other requirements applicable to the organisation in the area of occupational risk prevention.
- › To identify, assess, control and communicate risks involved in the City Council's activities, with the aim of preventing, eliminating or reducing them.
- › To promote training and awareness-raising in prevention as a fundamental basis for achieving the effective participation and motivation of all its employees.
- › To promote communication, consultation and participation mechanisms with its employees and their representatives, maintaining a regular participative dialogue focused on improving preventative actions.
- › To foster continual improvement in health and safety conditions, by means of implementing an Occupational Health and Safety Management System, while taking into account technological advances and organisational changes.

This policy will be communicated to the City Council's employees, autonomous bodies and public business organisations, collaborating companies and other interested parties.

CONTRACTOR RESPONSIBILITIES



This procedure guarantees that all companies
contracted by Barcelona City Council will be
responsible for:

A. Having a Occupational Health and Safety Plan.

B. Providing the information required by the City Council.

C. Taking account of the information received from the City Council in their risk assessment and the planning of their prevention activity.

D. Complying with instructions received from the City Council.

E. Providing their employees and/or subcontractors with the information received from the City Council before work begins and demanding compliance with occupational risk prevention regulations.

F. Notify in writing, where necessary, the performance of activities or processes indicated in the contract that regulations consider to be dangerous or to involve special risks and, in that case, to have available preventative resources with the appropriate training.

G. Notify in writing of the specific risks involved in the activities concerning any specific contract that may affect Barcelona City Council employees or those of the other companies concerned, especially, those risks that may be aggravated or modified by circumstances arising from the concurrence of activities.

For this reason, in the context of this coordination process, we are giving to you a series of safety rules and instructions that you must fulfill while you work for the City Council.

Your company is responsible for ensuring that the information contained in this manual reaches each and every employee that will be carrying out their work in Barcelona City Council and for ensure compliance with the regulations established therein.



Operating standards in Barcelona City Council workplaces for employees from other companies

OPERATING STANDARDS IN BARCELONA CITY COUNCIL WORKPLACES FOR EMPLOYEES FROM OTHER COMPANIES

This manual's indications do not exempt you from compliance with specific risk prevention regulations for each sector. This manual only aims to provide a reminder of the most basic regulations, addressed to the various employees who carry out work activities through a company contracted by Barcelona City Council.

For this reason, we request that you read the following regulations carefully. If there is anything that you do not understand, consult your supervisor and remember that you must comply with these regulations at all times while you are in Barcelona City Council facilities.

Always comply with the instructions you receive from the Barcelona City Council representative and/or your supervisor.

Do not move around Barcelona City Council facilities if you are not authorised to do so. Do not handle any Barcelona City Council equipment or installation if you have not been authorised to do so. You must also obey safety signs.

Here is a series of basic regulations relating to various aspects, including keeping the workplace clean and tidy, working at height or with chemical products, using work equipment or individual protection equipment, etc.

Make sure you take prevention into account, whatever your job is. Whether your work involves the maintenance of any installations or equipment, the renovation of a municipal centre, cleaning windows, repairing, working on air-conditioning equipment or if you are just visiting to perform a technical assessment.

TIDINESS AND CLEANING LEANING

In order to achieve good working conditions and to minimise the risks involved in a work activity, tidiness and cleaning are of primary importance. When you work in Barcelona City Council facilities, we ask you to take into account the following basic regulations for tidiness and cleaning.



TIDINESS AND CLEANING LEANING

- › Keep your work area clean and tidy at all times. If necessary, signpost it.
- › Make sure the lighting in the work areas is enough.
- › Physically delimit any work activities that may involve a risk to third parties.
- › At the end of the working day, put away any equipment and materials you have used. Place the materials in safe piles, ensuring stability.
- › If you leave the workplace, unplug the equipment.

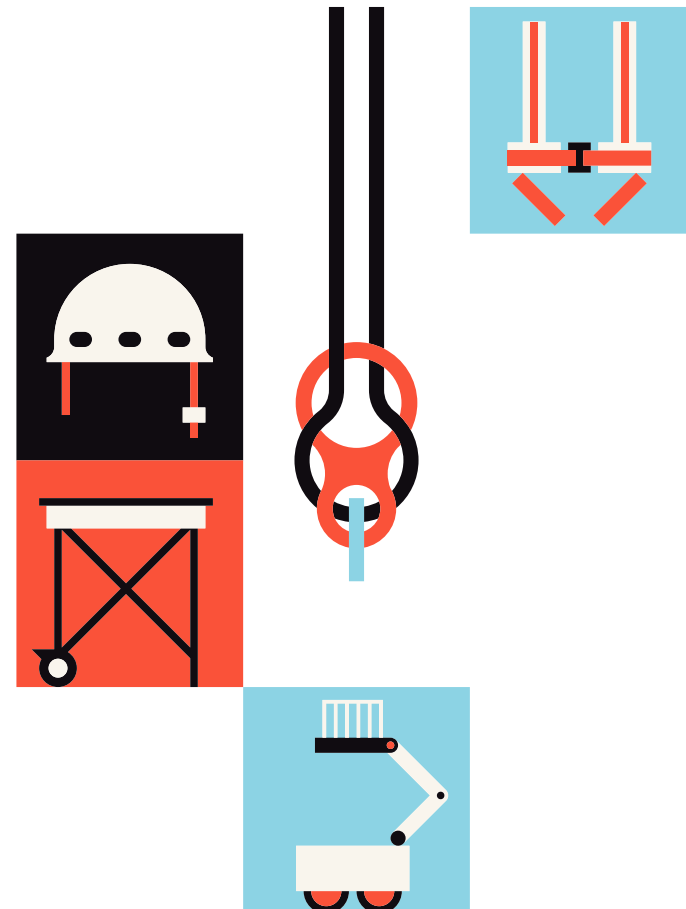
- › If you find an anomaly in any installation, process, equipment, etc., whether it pertains to your company or Barcelona City Council, tell your supervisor immediately.
- › The job is not considered to be finished until the area is clean and free of unsafe conditions. Use cleaning as a control measure for the state of work materials, tools and equipment.
- › Whenever a product is spilled, clean it up immediately.
- › Place appropriate container wherever waste is generated and eliminate them with the necessary frequency (daily, weekly, etc.) according to the type of waste.

- › Don't use dangerous solvents or corrosive products for cleaning floors. Cleaning operations should not create hazards.
- › Control the critical locations that generate dirt.
- › Don't block evacuation routes and exits or fire-extinction equipment.
- › Signpost floors that are irregular, wet or covered by slippery substances.
- › Protect openings or unevenness.
- › Keep transit areas free from obstacles.

WORKING AT HEIGHT

Working at height, especially on roofs, ladders and scaffolding, is one of the main causes of accidents, often due to a lack of planning and control.

If you have to carry out tasks in municipal facilities that involve working at height, always remember the following safety regulations.



WORKING AT HEIGHT

> Make sure that work at height is carried out with using appropriate preventative measures. If collective protection equipment is not applicable or sufficient for preventing falls, use individual protection equipment: harnesses, safety ropes, etc.



Jobs at a height over **2 metres** above the operation point on the ground, that require movements or efforts that are dangerous for the stability of the worker, may only be carried out using a safety harness or by adopting other protective measures (elevated platforms, tankers, scaffolding, etc.). The harness must be secured with a standardised rope on a fixed, resistant anchorage point or by cables that form a lifeline.

Work at a height over 5 metres must be carried out on scaffolding or on elevated platforms, not on ladders.

Don't adopt awkward postures or use improvised means for carrying out work at height.

WORKING AT HEIGHT SCAFFOLDING, ROOFTOPS AND PLATFORMS

› Where scaffolding is used, safety conditions must be met. Only trained personnel may assemble and dismantle these structures. Use scaffolding with the CE conformity mark. Do not use warped pieces when assembling the scaffolding. Always put the brakes on mobile scaffolding.

› Pay special attention to ladder supports and the stability of platforms. Use support bases that are in good condition, and correctly installed and levelled.

› For work on rooftops without collective protection, you must use appropriate individual protection, have effective means of communication and work in groups of at least two persons.

› Do not work in adverse weather conditions: excessive wind, rain, frozen ground, etc.

› When transporting hand tools, use bags or a belt in order to leave your hands free.

› Maintain safety distances with power lines.

› Make periodic checks of ropes, harnesses and other safety equipment.

› Work platforms must not be overloaded; only keep essential equipment for the work on the platform. The material must be evenly distributed on the platform to avoid overloading certain points that negatively affects the stability of the whole.

› Access to work platforms must only be through the proper places and their batteries must be charged in open, well-ventilated areas that are at a safe distance from flames, sparks or fires. Smoking is prohibited in these areas.

› Always install railings, skirting board and a vertical safety net.

› Do not run; use footwear with non-slip soles.

WORKING AT HEIGHT OUTDOORS

› On hot days, especially in outdoor work, adopt the necessary precautions:



Use sun cream on parts of the body exposed to the sun.

Schedule the tasks of greater physical load at less heat hours avoiding, where possible, the period between 12 noon and 4 pm.

Take short breaks and rests often.

Workers should take turns performing the tasks that involve the most risk or special physical effort. Use lightweight clothing that allows transpiration during days of intense heat.

Protect your head with a helmet or a hat.

Drink often small amounts of liquids rich in mineral salts. Avoid alcohol and stimulant drinks (those containing caffeine). Drink cool (not cold) water regularly; don't wait until you feel thirsty.

Avoid heavy meals, especially those rich in fat-rich foods.

WORKING AT HEIGHT LADDERS

› Ladders must be checked periodically and before use. Do not use painted wooden ladders, as they may conceal defects.

› Stepladders have to be opened completely (as far as the stays will allow). The maximum height for working with this type of ladder is 1.5 metres. Check the anti-opening system and always work with both feet on the same side of the steps.

› Jobs using ladders at a height over 3.5 metres above the operation point on the ground, which require movements or efforts that are dangerous for the worker's stability, they can only be carried out using a safety harness or by adopting other protective measures.

› It is not permitted to transport or handle loads on ladders or from ladders when, due to their weight or size, they can compromise the worker's safety.

› Ladders may not be used by two or more persons simultaneously.

› For access to high places, the top of the ladder must be at least 1 metre higher than the highest support point. Never climb onto the last rung of the ladder.

WORKING AT HEIGHT ROPE ACCESS WORK

Rope-access work is understood as the work carried out at height that requires the use of equipment such as ropes, anchor points, assisted-braking belay devices and other items.

These techniques are often used for jobs where assembling traditional systems (scaffolding) is technically difficult or presents an excessive risks.

Because it is a common practice for companies that clean the windows or façades of municipal buildings, we believe it is convenient to remind you of the following:

› Don't walk on non-resistant rooftops.

› The work or access teams have to ensure safe fall arrest: make sure that the body falls the minimum possible distance, that the braking force does not cause injury and that, in the case of an accident, the user's posture allows them to wait for help.

› The anti-fall system must consist of a harness and a connection (by means of an anti-fall device or an energy absorber) to a safe anchorage point.

› The equipment must have the CE mark (sports material is not good enough; it must be work equipment and it must meet specific standards) and it must have an instruction manual.

WORKING AT HEIGHT WORKING AT HEIGHT

› Pay attention to expiration dates: it is recommended to change all the materials (harnesses, helmets, anchoring kit, etc.) at least every 5 years. Must be taken into account that this type of material has to be kept in a very good condition and must be durable and resistant.

› Report any anomaly detected in the equipment and, in all cases, reject any equipment that has suffered a fall.

› Use ropes of at least 10 mm in diameter.

› Workers must wear helmets, work clothes, gloves and safety shoes, which must be adapted to the type of work being carried out. These must be used continuously throughout the whole period of the job. The equipment must be kept in a place that is protected from bad weather, light or other possible aggressive agents.

› The choice of materials must be made by skilled personnel and must include the collaboration of the worker concerned.

› Harnesses must be full-body, with padding on chest and legs, three anchorage points (chest, abdominal and posterior - for rescue -) and side rings.

› Harnesses usually do not have to be exchange between several workers (adaptation to size and individual adjustments to each piece of equipment are an important part).

WORKING AT HEIGHT ROPE ACCESS WORK

› Before starting work, the worker must check and verify all the items of the fall-arrest equipment, and must reject any equipment or item that has any kind of defect or damage.



It is essential to carry out good maintenance on harnesses and ropes:

Store them hanging up in a dry, cool place.

Protect them from contact with aggressive substances (acids, bleaches, welds, oils).

Avoid ropes coming into contact with water, as this reduces their resistance by around 10%.

Wherever is possible, avoid their exposure to lightning and direct sunlight.

Transport them in a case, if it's possible.

Remember that the textile components of the fibres aged and swell up.

› Only authorised personnel that have been specially trained on rope-access work can carry out this kind of job.

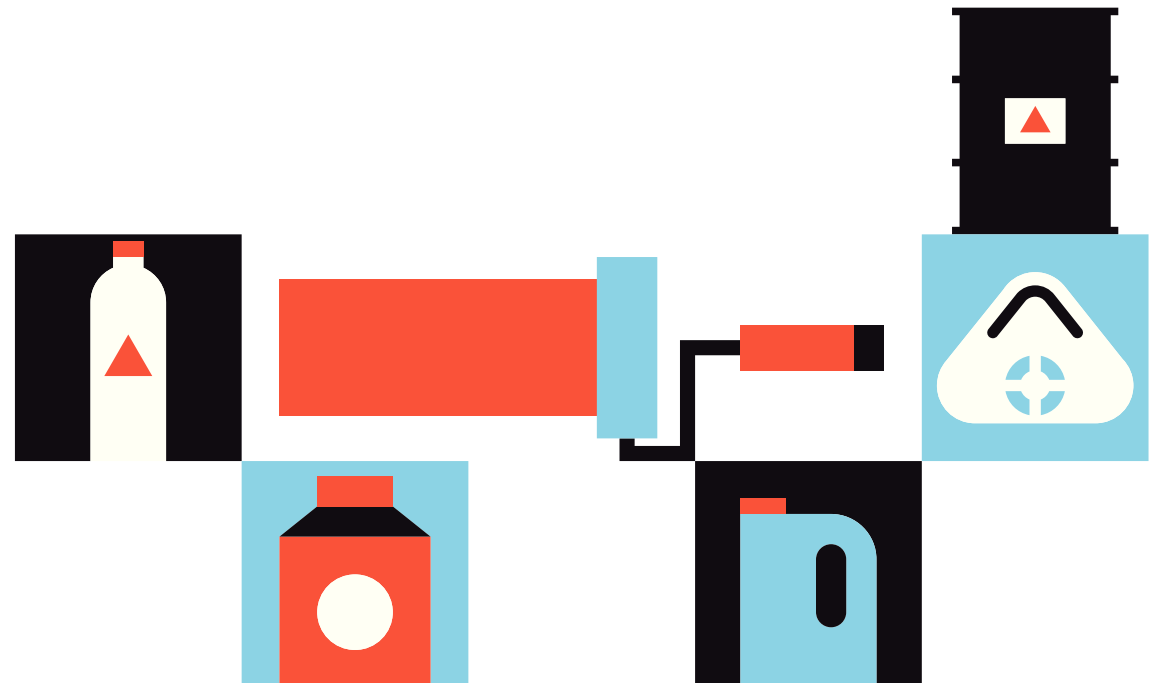


The workers who carry out this kind of work must have specific knowledge about the techniques for using the rope-access equipment, with two ropes, one for suspension and one for safety, for each worker. The workers must be trained on installation techniques, including natural and installed anchor points, and on assisted-braking belay techniques once the equipment has been installed.

CHEMICAL PRODUCTS

Exposure to chemical products can pose a risk to health, both for the staff that uses them and for the staff that is nearby.

If you have to handle chemical products during your work (pest control, painting work, cleaning work, etc.), take the following precautions into consideration in order to eliminate or minimise that risk as far as possible:





CHEMICAL PRODUCTS

› As a basic regulation for handling chemical products or substances, always follow the manufacturer's instructions (on the label or in the product's safety sheet). Follow the indications in the H sentences, that give you information about risks, and P sentences, that give you information about safety measures.

› Close product containers once they have been used.

› Clean up spillages with absorbent materials and deposit them in the appropriate container.

› When filling containers, use funnels where necessary.

› Never keep chemical products in soft-drink, water or any other drink bottles.

› Don't eat or drink when handling dangerous substances.

› Make sure that containers and recipients are in a good condition.

› Protect all parts of your body that could enter in contact with the dangerous substances: use aprons, gloves, boots, safety goggles or glasses, facial screens, etc. according to the product's instructions (label or safety sheet).

› Respect scrupulously personal hygiene rules: wash your hands, cure your wounds immediately and protect them, even very small ones

CHEMICAL PRODUCTS

› Remember that all containers that contain products—including both original containers and those that the products have been placed in— have to be perfectly identified with the product name and the main risks.

› Notify the City Council about the list of chemical products (cleaning products, detergents, disinfectants, glues, paints, solvents etc.) that you use in municipal centres; and provide them with the corresponding safety sheets.

› Make sure that you provide the procedures of action or methods of work and the individual protection equipment necessary for a safe manipulation. Extremes the ventilation measures.



We inform you that domestic pesticides (fly and mosquito sprays, anti-greenfly products, etc.) are authorised exclusively for domestic use (private homes). Their use is prohibited in municipal detergents, disinfectants, glues, paints, workplaces.

The use of these insecticides may interfere with the integrated pest-control procedures and cause health problems for the centre's employees and users.

› furthermore, whenever painting work is carried out, it is necessary to:

Ensure permanent ventilation through windows. Where ventilation is insufficient or non-existent, forced extraction must be available..

Once the painting work has been completed, notify the City Council representative where the air-conditioning system's filters will have to be changed.

INDIVIDUAL PROTECTION EQUIPMENT

Individual protection equipment (IPE) is defined as "any equipment, complement or accessory worn or used by the worker for protection from one or various risks that may threaten their safety or health".

The IPE offers protection from impacts, cuts, burns, noise, cold, falls and the inhalation or contact with chemical or biological products that may occur during the performance of certain tasks.

Remember that collective protection (railings, ventilation system, acoustic insulation) must always take precedence over individual protection.



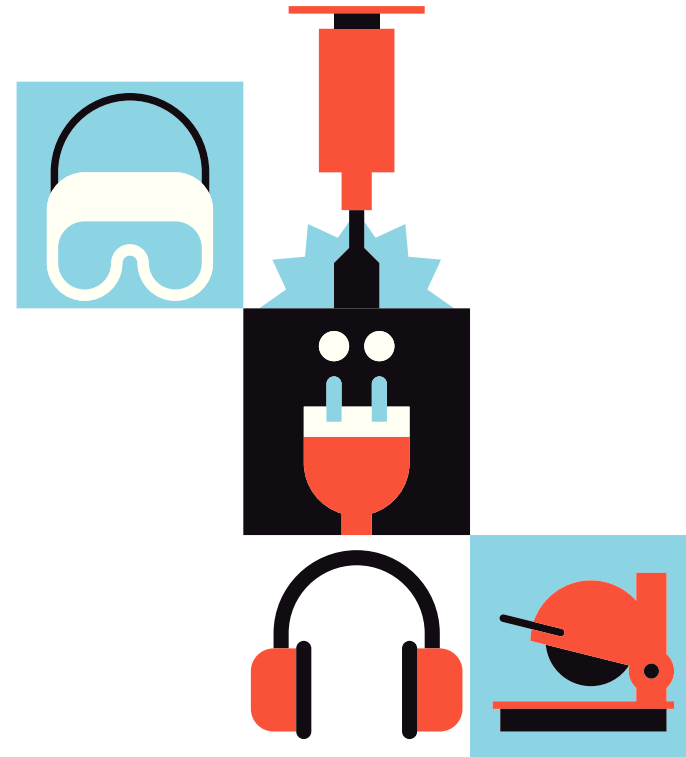
INDIVIDUAL PROTECTION EQUIPMENT

For this reason, it is very important to take the following instructions into account:

- › Workers must be provided with the necessary individual protection equipment for carrying out their work.
- › This equipment, which must have the CE mark and be in a perfect condition, must be available to the workers.
- › Ensure the correct use of this equipment at all times and replace damaged or worn items. In this regard, it is necessary to inform and train the personnel.
- › Protection equipment requires a period of adaptation. Therefore, although you find it uncomfortable, do not give up at the first attempt; remember that it will protect you in the event of an accident.
- › Immediately report any damage in the equipment; use it and store it appropriately.

WORK EQUIPMENT

Regarding the equipment that you use to carry out your work, always remember the health and safety prevention criteria that we list below.



WORK EQUIPMENT

› All work equipment must have the protection established by regulations.

› Never deactivate safety mechanisms or eliminate safeguards. Before starting work, check that the safety controls are working and the protections are correctly placed.

› At the end of the working day, they have to be stored in safe conditions: switched off, unplugged, under lock and key, according to how dangerous they are, and not accessible to third parties.

› Avoid overloading the electrical installation.

› Any cleaning, adjustment, maintenance, repair or checking operations should be carried out when the machine is switched off and unplugged, once it has been verified that there is no power and having taken the necessary measures to prevent any accidental switching on of the machine (consignment, signposting, etc.).

› Report any faulty machinery immediately.

› Do not wear necklaces, chains, bracelets, wide sleeves or any other items of clothing that may get caught on the moving parts of machines or tools.

WORK EQUIPMENT

› Minimize, as far as possible, the noise generated during your work, by using tools and equipment in a good condition, making screens, using absorbent materials, etc. Use hearing-protection equipment in cases where it is impossible to reduce noise at source. Good maintenance of work equipment reduces noise levels.

› Only authorised, qualified personnel may use cranes and vehicles.

› If you use equipment for lifting and handling loads, such as bridge cranes, forklifts, pulley blocks, etc., use them in a safe way (follow the loading diagrams, perform proper maintenance, etc.).

› Working with cutting machines causes the dispersion of particles, with a risk of hitting the eyes and face. Use cutting machines with incorporated vacuum aspirators, select adequate sharpening tools and use eye and face protection.

WORK EQUIPMENT

WELDING EQUIPMENT

- › Keep welding equipment in safe conditions at all times (protection, cable insulation, connections, etc.).
- › When you take a break or at the end of the working day, make sure that there is no incandescent slag and that the equipment is left in safe conditions.
- › Do not weld near inflammable products or recipients that have contained them (solvents, paint, etc.).
- › Have a hand-held fire-extinguisher near your work area.
- › Use the necessary IPE (gloves, welding mask, etc.).
- › Ensure adequate ventilation during welding tasks and protect your surroundings.

GAS CYLINDERS

- › Don't store more gas cylinders than are strictly necessary in your work area.
- › Make sure they are properly secured and kept away from any sources of heat.
- › At the end of the working day, turn off the cylinders and place them in the authorised area by the City Council.

HAND TOOLS

- › Select the appropriate tool for each job.
- › Keep tools in good condition. Transport them and keep them in a safe place.
- › Keep cutting tools sharp, in order to avoid unnecessary overexertion.
- › Avoid surroundings that make the correct use of tools difficult (making you adopt awkward postures and/or unnecessary effort).
- › Where necessary, use appropriate individual protective equipment.
- › Where there is a risk of electrical contact, use tools that have protective insulated handles and anti-spark items in inflammable surroundings.

WORK EQUIPMENT

----- AUTOMOTIVE EQUIPMENT (DUMPERS, TRACTORS) -----

The dangers arising from this type of equipment are caused by a lack of training, malfunctioning and accidents caused by the transported load, which involve a risk of overturning, the worker falling, running someone over, trapping someone, and impacts.

› You must receive appropriate training if you are the driver of this equipment.

› Do not carry passengers and always respect established traffic regulations.

› Control the load you are carrying at all times.

› Vehicle inspection and maintenance must follow the manufacturer's instructions.

› There is a vehicle-maintenance manual that indicates the periodical verification, lubrication and cleaning that must be carried out.

WORKS AT PUBLIC PATH

If you work on public highways or their surroundings (surfacing, traffic-light and traffic-signal maintenance, public highway inspections, collecting rubbish, sewer work, etc.), there is added risk, which involves an additional series of safety measures:



WORKS AT PUBLIC PATH

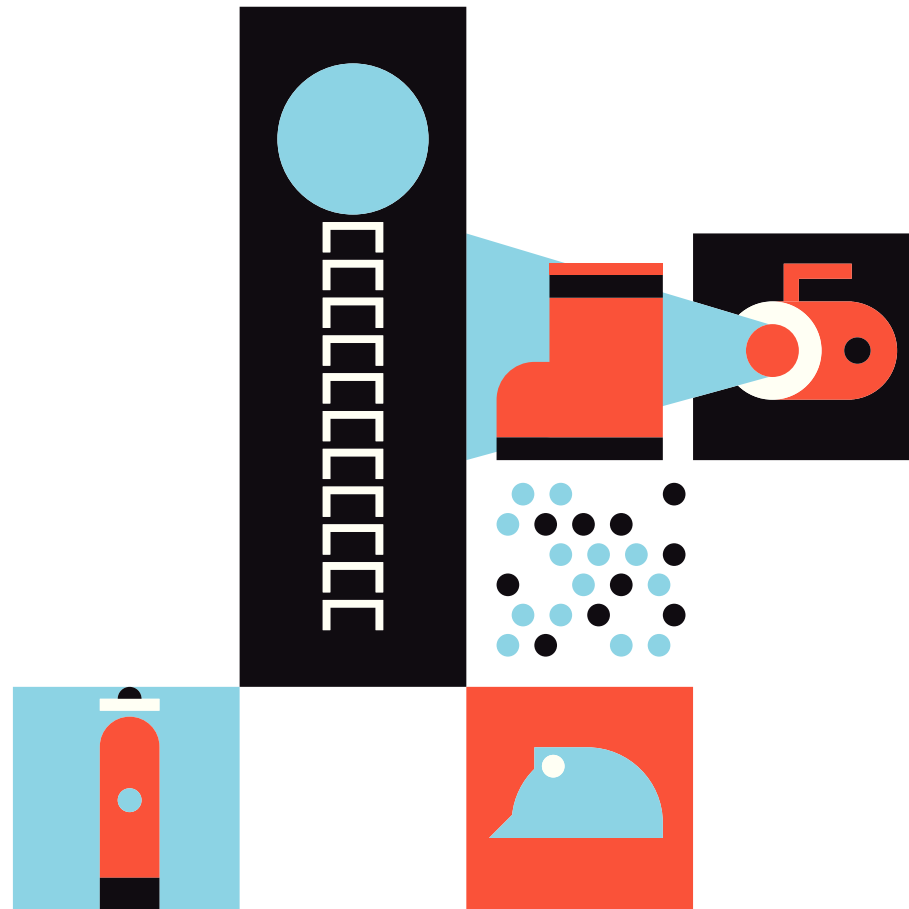
› Signpost the activity according to the speed limit on the roadway concerned (signage, perpendicular to the direction of traffic, has to be placed at a distance that allows drivers to reduce speed with enough time).

› Delimit the work area (tape, plastic barriers, cones, lights).

› Workers must wear clothes with high-visibility elements.

CONFINED SPACES

Confined spaces (shafts, tunnels, pits, etc.) involve a multitude of risks, such as a lack of oxygen and space, the presence of toxic gases, etc., which makes it necessary to take stricter precautions. Work carried out in the sewer system is one example.



CONFINED SPACES

› Make sure you have prior information concerning the type and characteristics of the installation to be visited.

› While you are working inside the installations, there must be support personnel outside in case of any incident. This exterior personnel must have training in first aid and fire extinction.

› The work team inside tunnels and collectors must consist of at least two people.

› Carry effective means of communication (transceivers, mobiles). Before entering, check that they are charged and working properly.

› Ensure ventilation in the space. Before starting work, the installations (manholes, collectors, etc.) must be left to ventilate for at least 15 minutes.

CONFINED SPACES

› When visiting points far from the exit point, use self-contained breathing gear.

› Before entering, make sure there is oxygen and that there are no dangerous gases, using appropriate detectors; where necessary, according to the depth and length of the space, carry continuous monitoring equipment.

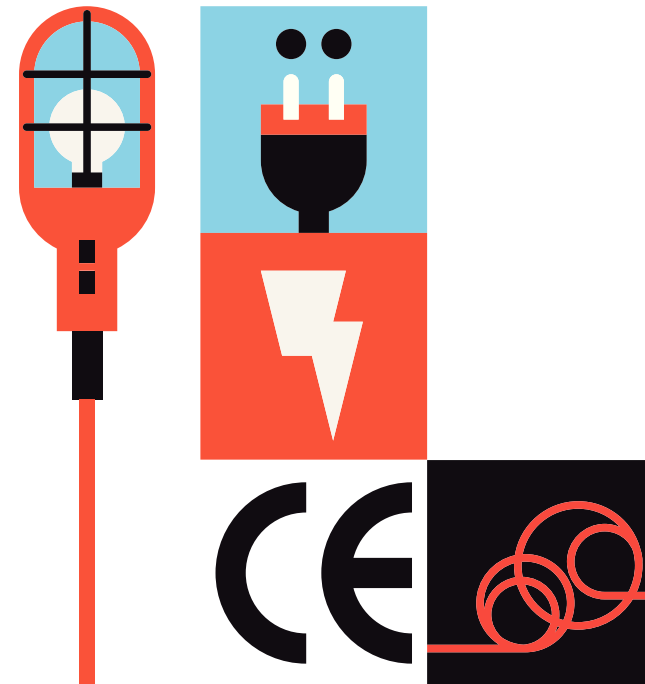
› Wear the equipment that is necessary for the space: safety footwear, safety helmet, safety harness, self-contained breathing equipment.

› Workers must have the necessary training in rescue techniques and first aid.

ELECTRICAL RISKS

Risks caused by electrical energy are:

- › Electric shocks by direct or indirect contact.
- › Burns, falls or impacts caused by electric shocks or arcs.
- › Fires or explosions caused by electricity.



ELECTRICAL RISKS

› If you detect any defects in the electrical installation, tell your supervisor.

› Electrical machines and devices used must fulfill with low-voltage electrotechnical regulations.

› Do not carry out live electrical work unless you are a specialist and you have authorisation.

› Do not handle wet electrical devices or with humid or wet hands, and do not clean equipment that is connected to electrical current.

› Don't unplug electrical equipment by pulling on the cable.

› Avoid placing cables in areas of transit or in places where they can suffer damage (getting wet, subjected to dragging or crushing, etc.).

› Maintain the safety distance regarding overhead power lines (3 m for medium voltage and 5 m for high voltage).

› In areas of pedestrian transit, provisional power lines must preferably be overhead (minimum height: 2 m).

› Portable lights must be waterproof, with an insulated handle and protective grill for the 24 V bulb.

› Use equipment with the CE mark in case of electrical risk.

› Portable machinery must have a protection system (the most common is double insulation).

› Protect hand tools against electrical contact and keep them free of oils and slippery substances .

ELECTRICAL RISKS

> Do not connect multiple plugs to sockets, nor appliances that have defects in their casing.

> Protect electrical cables with hard rubber or plastic conduits when they are placed on the ground in areas of transit.

WORKING LIVE

Remember the 5 basic safety rules for electrical risk:



Disconnect power supplies. Examine all power sources and isolate the part to be worked on.

Lock or block cutting devices and signpost that manoeuvring is forbidden.

Ensure the absence of current in all the separated parts. Earth and short-circuit all possible power sources.

Delimit and signpost the work area and do not re-establish service without ensuring that there is no one working there.

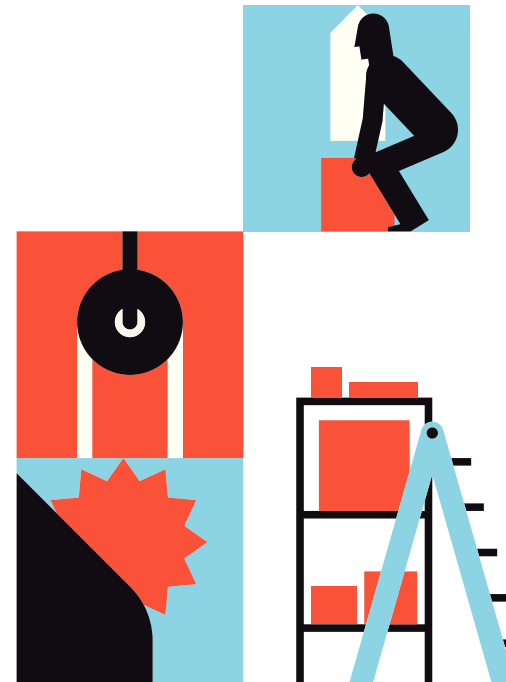
MANUAL HANDLING OF LOADS

The manual handling of loads is a daily activity in work environments and the cause of a wide variety of accidents. The most common injuries include: bruises, cuts, wounds, fractures and, above all, musculoskeletal disorders.

They can affect any part of the body, but the most susceptible areas are the arms and back, especially the dorso-lumbar region.

Dorso-lumbar injuries can range from lumbago to intervertebral disc problems (herniated discs) and vertebral fractures due to overstraining.

Whenever possible, handling loads must be done using mechanical means. If mechanical handling the load is not possible and it must be done by hand, obey the following instructions:



MANUAL HANDLING OF LOADS

› Plan the lifting. Follow the indications on the packing, observe the load (approximate weight, shape, handholds) and plan the transport route.

› Stand with your feet a shoulder-width apart, in order to achieve a balanced posture, placing one foot in front of the other in the direction of the movement.

› To lift the weight, bend your legs, gently lift by extending your legs, and always keep your back straight. (1)

› Hold the load with both hands and keep it in contact with your body.

› Lift the weight gradually without jerking.

› Don't turn your body while lifting the load; it is better to turn your feet. (2)

› Ask a colleague for help if the load is too large or too heavy.

› Use suitable, stable, non-slip footwear.

› If you are lifting from the floor to a considerable height, rest the load half way so you can change your handholds.

› Organise storage in such a way that the heaviest loads are at medium height, and leave the top and bottom levels for lighter objects.

(1) Correct



Incorrect



(2)



MANUAL HANDLING OF LOADS



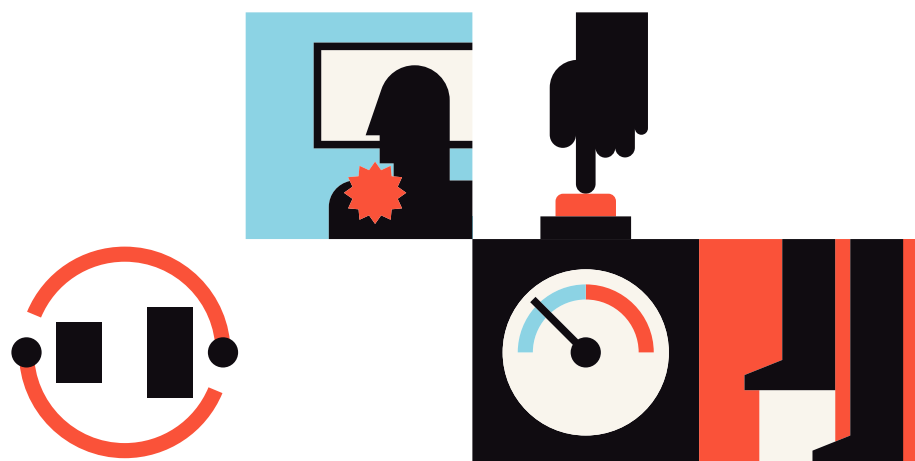
Even when handling a light load, if it is done in ergonomically unfavourable conditions (holding away from the body, inappropriate posture, frequently, in adverse environmental conditions, on unstable ground, etc.) this may generate a risk situation.

Under ideal handling conditions (following the above indications in an adequate work environment) the maximum recommended weight should not be greater than 25 kg. If the load weighs more than 25 kg, ask for help. If you are sitting down, it is recommended not to lift loads weighting more than 5 kg.

Not all loads can be handled according to these instructions and they could involve to use specialised techniques, as in the case of moving patients.

POSTURAL FATIGUE AND REPETITIVE MOVEMENTS

Prolonged work, maintaining the same postures and repetitive work can be the cause of musculoskeletal disorders. In order to reduce this risk, remember:





POSTURAL FATIGUE AND REPETITIVE MOVEMENTS

- › Avoid awkward postures whenever you can.
- › Keep your back straight and avoid any unnecessary leaning or torsion.
- › Alternate some postures with others that facilitate movement.
- › Change the position of your feet frequently, minimising any possible physical fatigue.
- › If you work standing in the same posture, rest one foot on a stool or a footrest to help your body relax.
- › Regulate breaks and rotate tasks.
- › Reduce the effort you make by using tools with long handles.

DATA SCREENS

Many external-company employees who carry out work for Barcelona City Council, either inside or outside our installations, habitually use data screens, especially for management tasks, technical and administrative tasks.

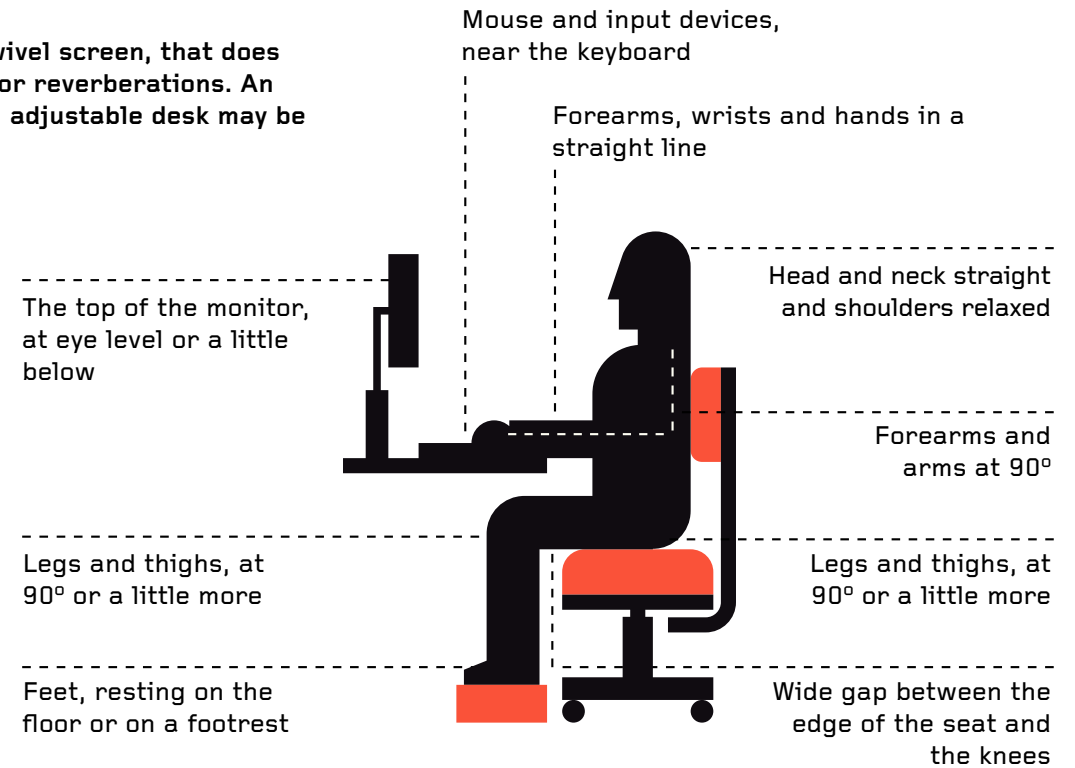
The equipment characteristics, the work environment and the posture can all be health-risk factors. For this reason, we are detailing the appropriate characteristics for these items and we outline a series of postural hygiene recommendations.



DATA SCREENS

- › The chair must be height-adjustable, so it can adapt to the size of the desk, with lumbar support for your back, with five casters, that permit easy movement, and with an appropriate backrest in terms of height and inclination.
- › The desk must be big enough to arrange all necessary work tools and it must have a non-reflecting surface.
- › It is a good idea to take breaks in order to reduce physical and mental fatigue.
- › Correct posture should not only be maintained during the working day, but also outside the working environment.
- › Regarding the screen, the letters must be well defined and configured clearly, and they must be of an adequate size. There must be enough space between letters and lines.

- › The image must be stable. It must be possible to adjust brightness and contrast.
- › It must be a tilt and swivel screen, that does not produce reflections or reverberations. An independent stand or an adjustable desk may be used.



DATA SCREENS

› The keyboard must be tilted and independent from the screen. There must be enough space in front of the keyboard to rest arms and hands. The surface must be matt, in order to avoid reflected light. The key arrangement has to be easy to use. The symbols on the keys have to be easily visible.

› Document holders (lecterns) are recommended when working habitually with documents. This is advisable because it allows the document to be placed at a similar distance and height to the screen and reduce sight adjustment and turning one's head. It must be height-adjustable and sturdy enough to support the weight of the documents.

› If it is not possible to adjust the height of the chair and/or the user cannot reach the floor with their feet, a footrest must be used.

› Workplace configuration must take into consideration the range of anthropometric sizes of possible users.

› The workplace must be big enough to carry out the work comfortably.

› General and special lighting, where needed, must ensure adequate levels of light and luminosity between the screen and the work environment.

› Work areas must be arranged so that there is no direct glare or reflection that causes difficulty in viewing the screen.

DATA SCREENS

RECOMMENDED RELAXATION EXERCISES



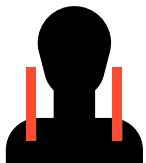
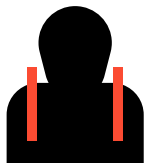
Slowly turn your
head to the left and
to the right



Slowly incline your
head to the left and
to the right



Slowly incline your
head backwards.
Lower your chin
towards your chest



Raise your shoulders,
with your arms
hanging next to your
body. Lower your
shoulders



Move your wrists
up and down



Rotate



Open and
close your hands



Stretch your arms



With your hands
on the back of your
neck and your back
straight



Slowly raise your
arms to the back of
your neck and let them
drop, alternating right
and left arms.



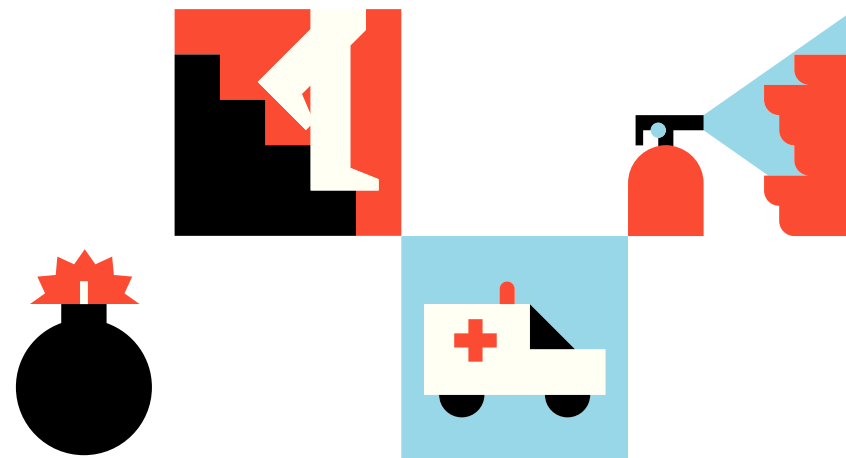
Slowly bend your
legs and then
return to the
starting position

EMERGENCIES

Municipal work centres have emergency plans geared to evacuation; i.e. it does not have intervention teams, as it is considered that the fire service's average arrival time in Barcelona city is quick enough.

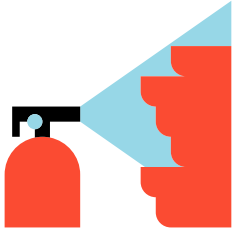
External companies that manage municipal facilities must draft and implement their own emergency plans.

In our work centres, you will find the following information regarding cases of emergency:



EMERGENCIES

FIRE



Immediately warn the centre personnel and/or supervisor and, if they are unable to do so, call the **Fire Service (080)**.

Ask centre personnel for help and follow their instructions.

If there is smoke, leave the area in a crouched posture, in order to breathe fresher air.

Remember to **close the doors** as you are leaving the building.

EVACUATION



Always follow instructions given by centre personnel.

Keep calm, don't shout and, above all, don't run.

Do not use the lifts.

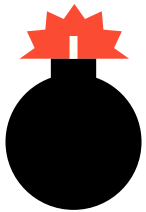
Go out onto the street through the nearest emergency exit.

Don't turn back or re-enter the centre for any reason until you are told to do so.

Don't stand in front of the door after you go out onto the street.
Move away from the building, towards the meeting point.

EMERGENCIES

BOMB THREAT

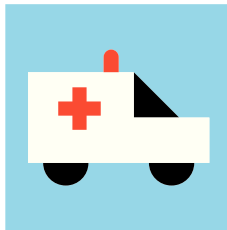


Don't touch or handle any suspicious objects..

Warn centre employees and/or supervisors immediately and follow their instructions.

Leave the area.

MEDICAL EMERGENCY OR ACCIDENT



Remove anything that may make the accident or the state of the victim worse.

Immediately warn centre employees and/or supervisors and, if they are unable to do so, call the **medical emergency services: (061)**.

If you know how, help the victim.

EMERGENCIES

We also ask you:

› To familiarise yourself with the emergency routes and exits of the municipal centres where you carry out your activities.

› Avoid blocking them.

› Give the name and telephone number of your occupational-accident insurance company and the corresponding emergency centre where possible injured workers should be taken to the City Council official who supervises your work.

And specifically, regarding fire prevention:

› Keep your work area clean and tidy.

› Don't smoke in areas where it is prohibited.

› Don't throw lit or badly extinguished cigarette ends in litter bins, rubbish bins, etc.; put them out completely and place them in the proper ashtrays provided.

› Don't do welding work in areas near recipients that contain, or have contained, inflammable products, such as paint, solvents, etc.

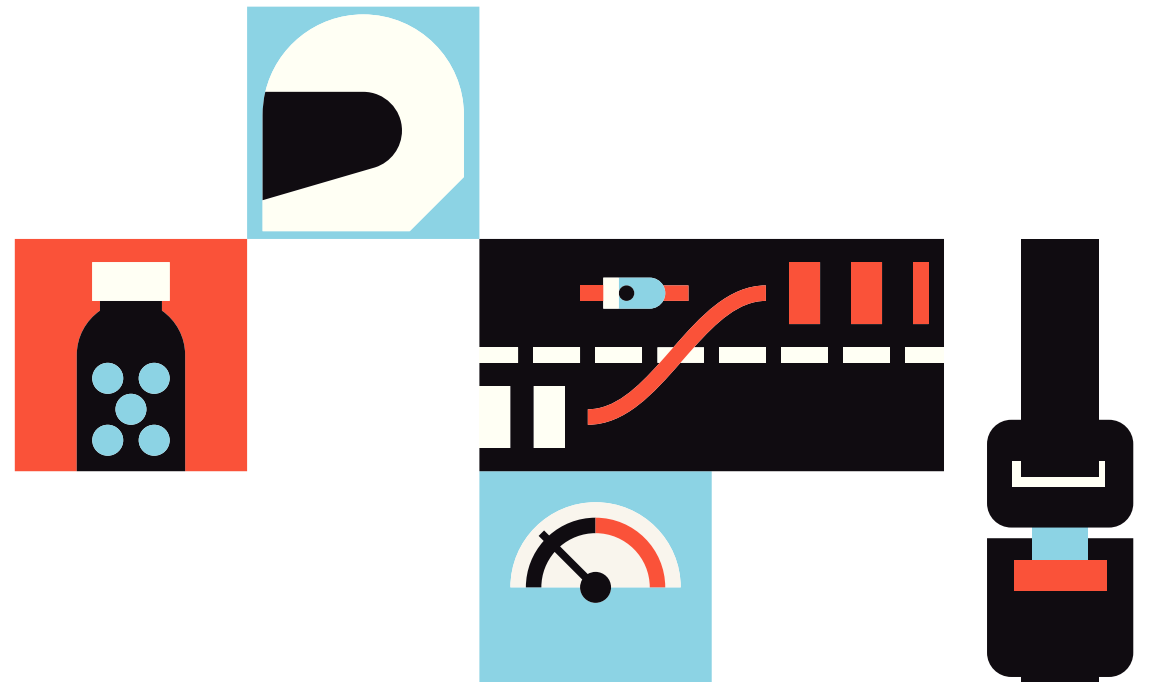
› Keep oxygen and acetylene cylinders clean from grease (especially valves and pressure regulators). If you are welding and have to stop work, never leave the blowtorch on.

› Don't store inflammable products outside authorised locations.

ROAD SAFETY

There are 30,000 traffic accident victims in Catalonia every year. Data indicates that almost half of them (45.7%) are drivers who are driving during working hours, either working or travelling to or from work and that, furthermore, they are the accidents with the most serious consequences.

When explaining the causes of accidents, most studies list the human factor as the main cause (between 70 and 80% of cases), but the roadway, the vehicle, the conditions of the journey and the worker's activity must also be taken into account.



ROAD SAFETY

1. THE HUMAN FACTOR

Causes listed under the human factor include:



Insufficient perception of the risk of speeding.

Transitory psychophysical states: use and abuse of alcohol or drugs, depression, stress, taking certain medicines, etc.

Physical causes: tiredness, sleepiness, sensory defects, etc.

Psychological causes: lack of attention, aggressiveness, exhibitionism, etc. Interfering behaviour: speaking on mobiles, switching on the radio, smoking, etc.

Lack of respect for traffic regulations, either voluntarily or through lack of knowledge. Intentional seeking of risks and thrills.

Age.

ROAD SAFETY

In order to avoid accidents of this kind, we draw your attention to the following basic road-safety regulations:

› Drive at the legally permitted speed limit, as it has been shown that speed limits are technically correct. › 45% of road deaths are attributed to this cause.

› Don't drink alcohol if you have to drive. Alcohol is the cause of 35% of road deaths.

› Don't drive under the effects of drugs or pharmaceuticals. They are the cause of approximately 10% of road deaths.

› Take into account and evaluate factors such as tiredness, sleepiness, stress, anxiety and temporary disorders, such as depression.

› Use warning signs when the ground is wet.

ROAD SAFETY

2. THE ROADWAY



Other causes may be:

The roadway being in a bad condition

Insufficient signage and marking

Lack of distinction between driving on a city road
and an intercity road

In this regard, we recommend:

› When driving on motorways, you must take into account road hypnosis, which causes sleepiness and lapses of attention.

› You need to rest every two hours.

› On roads that are not motorways, it is necessary to adapt to the roadway's geometric and structural parameters (curves, straights, roundabouts, etc.).

› Respect both vertical and horizontal signage.

ROAD SAFETY

3. THE VEHICLE



On other occasions, the vehicle is the cause of the accident, due to:

Defective state of the vehicle

Driving the vehicle without having carried out inspections

Using an inappropriate vehicle for the type of work to be carried out

Bad distribution of the materials and goods being transported

In these cases the prevention criteria are:

- › Carry out adequate maintenance of the vehicle according to the manufacturer's schedule for inspections.
- › Pass the MOT according to the established schedule.
- › Adjust both the steering wheel and the driver's seat to the proper position.
- › People in front and back seats should always wear a seatbelt.
- › Wear a helmet when riding a motorcycle.
- › Distribute the load correctly: the heaviest items at the bottom and the lightest at the top.

ROAD SAFETY

4. JOURNEY CONDITIONS AND DRIVER'S ACTIVITY



Causes such as:

Time of driving (day or night)

Type of weather

State of traffic

Season (winter, spring, summer or winter)

Lack of preparation and planning of the trip

Lack of information about the destination

Delays, unexpected situations and emergencies

They can be avoided if you:

› Take extra care in adverse meteorological conditions.

› Control the effects of tiredness on driving in fog, rain, snow, ice, etc.

› Make the journey, where possible, using public transport: train, bus, metro, etc.

› Prepare, plan and manage the journeys.

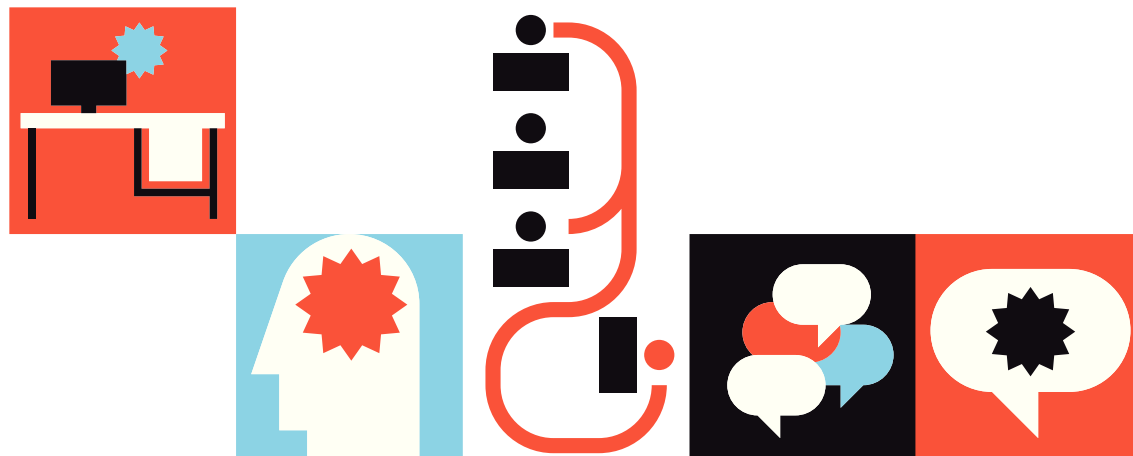
› Choose the most favourable routes and times, taking into account the length of time you will be driving.

› Analyse and deal with problems connected to traffic.

› Use multimedia communication and the transmission of digital images and data to avoid journeys wherever possible.

PSYCHOSOCIAL RISKS

Interpersonal relationships, workload, the complexity of the activity and the level of responsibility (either too much or too little) are some factors, among others, that may cause the appearance of fatigue, stress and psychosocial disorders.



PSYCHOSOCIAL RISKS

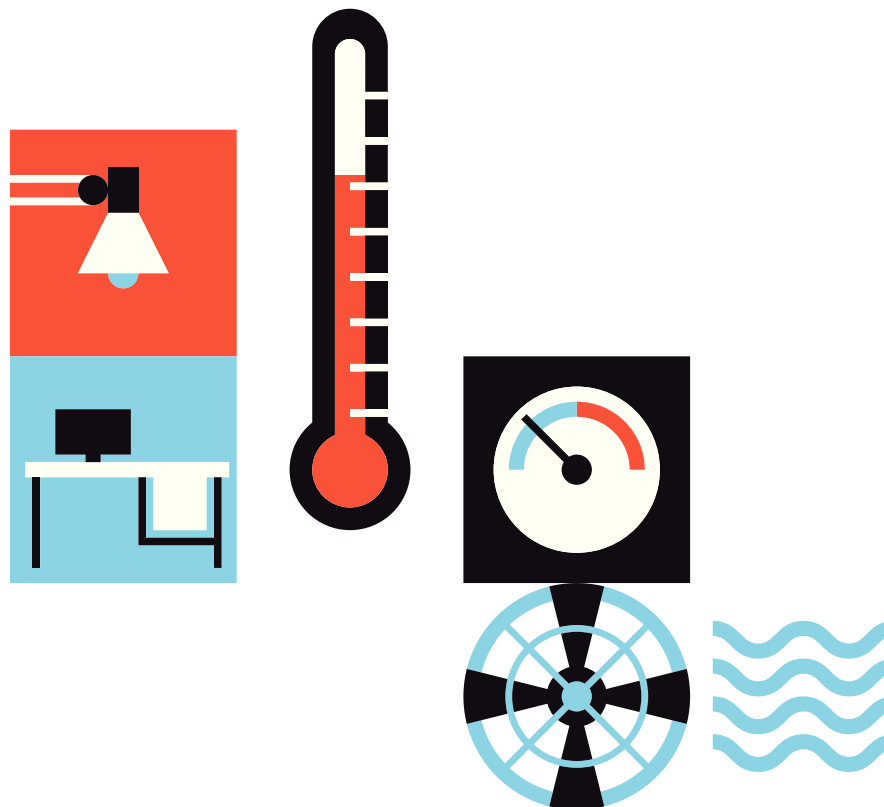
Remember:

› A work environment that conserves the dignity and freedom of its workers favours an appropriate working atmosphere and helps to avoid the appearance of psychosocial risks.

› Mutual respect, internal communication, recognition of work well done and retraining programmes are some of the basic tools for fostering a pleasant working environment and for avoiding violent situations.

ENVIRONMENTAL CONDITIONS

Good environmental conditions can determine whether your workplace is a comfortable place for your everyday working activity.



ENVIRONMENTAL CONDITIONS

Good conditions:



Temperature between 20 and 24 °C in winter, and
between 23 and 26 °C in summer.

Humidity between 30 and 70%

Good ventilation

Adequate lighting

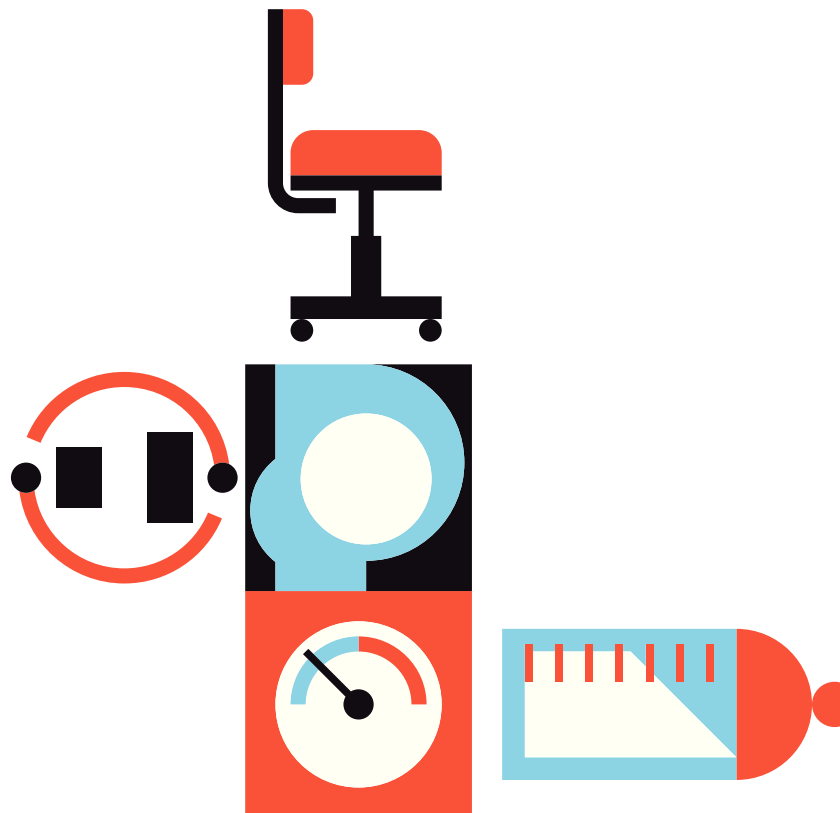
Sources of noise isolated

PROTECTION FOR HYPERSENSITIVE PERSONNEL

In order to ensure that the working conditions experienced by employees carrying out their assigned tasks do not suppose a safety risk for them, their colleagues or third parties, the contracted company must adopt appropriate preventative measures to eliminate or reduce those risks.

In that sense, not only working conditions have to be considered (risks and risk factors), but also any special sensitivity that a particular person may experience at work.

These added risks experienced by certain people in certain individual biological situations, of a temporary or permanent nature, detected through health checks, have to lead to the adoption of complementary preventative measures in order to ensure that protection levels for that person are the same as for their colleagues.



PROTECTION FOR PARTICULARLY SENSITIVE PERSONNEL. MATERNITY

Professional life and pregnancy are compatible provided that appropriate conditions are available.

Many women work during their pregnancies without suffering any complications, but some jobs involve certain health and safety risks for them.

Working without risks depends on the type of work carried out and the future mother's state of health. Conditions that can be deemed as acceptable in normal situations may not be so during a pregnancy. All measures aimed at protecting maternity, and specifically, the following groups are considered to be of maximum importance:



Pregnant women

Women who have recently given birth

Women who are breastfeeding

PROTECTION FOR PARTICULARLY
SENSITIVE PERSONNEL.
MATERNITY

The risks they are exposed to (dangerous substances, biological agents, noise, stress, ergonomic factors, etc.) can be harmful not only for the mother, but also for the baby, because of the close physiological and emotional contact between a mother and her baby.

What to do in case of a pregnancy

Work risks affecting pregnancy and breastfeeding can be prevented. In order to carry out effective prevention of specific risks for the health of the mother, the foetus and the baby which may be involved in work activities during a pregnancy:

- › You must inform supervisors responsible for risk prevention that you are pregnant as soon as possible, to ensure greater effectiveness of prevention activities and avoid risks during the pregnancy.
- › Your company must request a medical report from the Health Monitoring Service, taking into account the tasks carried out and the environmental conditions for the worker.

In accordance with Article 26 of Act 31/1995, for occupational risk prevention, the measures to be adopted are:

- › Adapting work conditions or duration, which may include the cessation of night-time or shift work.
- › Changing the place of work.
- › Limiting functions.
- › If limiting the risks or changing the workplace is not possible, the worker will move to a situation of risk benefit during the pregnancy as a professional contingency (Equality Act 3/1997).

PROTECTION FOR PARTICULARLY SENSITIVE PERSONNEL. MINORS

Minors between the ages of 16 and 18 must be considered as particularly sensitive workers for certain risks, as their development is still incomplete and they lack the experience and maturity to assess existing or potential risks, so, from the perspective of the Occupational Risk Prevention Act, they merit special protection.

These workers need good advice, information and supervision, in addition to appropriate, safe and healthy workplaces.

In accordance with established regulations in this area, the company must adopt a series of measures and criteria in each case, in order to carry out the effective prevention of specific risks that may arise from the work activities of these workers, and to thereby guarantee their safety and health at work.

HEALTH MONITORING

Business people have to guarantee their workers periodic health checks, in accordance with the risks involved in the work they carry out.

For this reason, their personnel must be offered a specific medical check-up. The periodicity of this check-up must be planned according to the inherent risk the workers are exposed to when carrying out their jobs, as well as their state of health.

The measures for monitoring and controlling the health of personnel must be implemented respecting the confidentiality of all the information related to their state of health.





Relevant legislation

LEGISLACIÓ A TENIR EN COMPTE

BASIC REGULATIONS

Act 31/1995, of 8 November on occupational risk prevention.

Modified by Act 54/2003

Royal Decree 39/1997, of 17 January, approving the regulations on prevention services.

Modified by RD 604/2006

SPECIFIC REGULATIONS

RD 171/2004 of 30 January, developing Article 24 of Act 31/95, of 8 November, on occupational risk prevention, in the area of coordinating business activities

RD 485/1997 of 14 April, on minimum provisions in the area of safety and health signage in the workplace.

RD 486/1997 of 14 April, establishing minimum health and safety provisions in workplaces.

RD 487/1997 of 14 April, establishing minimum health and safety provisions relating to the manual handling of loads that involves risks, in particular dorso-lumbar risks, for workers.

RD 488/1997 of 14 April, establishing minimum health and safety provisions relating to working with equipment that includes data screens.

RD 773/1997 of 30 May, establishing minimum health and safety provisions relating to the use of individual protection equipment by workers.

RD 1215/1997 of 18 July, establishing minimum health and safety provisions for the use of work equipment.

RD 1627/1997 of 24 October, establishing minimum health and safety provisions for construction work, modified by Royal Decree 604/2006.

RD 314/2006 of 17 March, which approves the Technical Building Code.

Llei 32/2006 of 18 October, regulating subcontracting in the construction sector. RD 1109/2007, of 24 August, for the implementation of Act 32/2006.

RD 614/2001 of 8 June, on minimum provisions for the protection of workers' health and safety regarding electrical risks.



Useful addresses



USEFUL ADDRESSES

Generalitat of Catalonia.
Ministry of Business and Employment

Spanish Ministry of Employment.
National institute of Safety and Hygiene at Work

European Agency for Health and Safety at Work

World Health Organisation

**Catalan Ministry of Health (Health information of
interest to the general public)**

Thank you for your
collaboration in making
effective occupational risk
prevention possible!

With the collaboration of Barcelona Provincial Council



Ajuntament
de Barcelona